Cement MILL SECTION of

Concrete

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Foreign Cement Producers Active

The following interesting facts relative to the cement industry in European and South American countries are taken from *Special Monthly Cement Bulletin No. 10* just issued by the Minerals Division of the Bureau of Foreign and Domestic Commerce, Washington, D. C. The bulletin is compiled by Guy C. Riddell, chief, Minerals Division.

BELGIUM

By Julian F. Harrington

VICE CONSUL, ANTWERP, FEBRUARY 12, 1925

The invoice records of the American Consulates at Brussels and Ghent and of the Consulate General at Antwerp indicate that the following quantities of cement were shipped to the United States during the month of January, 1925:

Antwerp	14,406	metric tons
Brussels	9,095	" "
Ghent	542	" "
Total	24,043	" "

The figures for January show a substantial increase in the volume of cement shipped from Antwerp to the United States as compared with those for the preceding month of December, 1924, when a total of 20,465 metric tons of cement were shipped to American ports according to the invoice records of the three consulates in Belgium.

As a result of the new Belgium customs tariff which went into effect on November 10, 1924, there has been a delay in compiling total export figures as well as import figures since October, 1924.

The wholesale price on domestic transactions during the past month, as quoted by the "Union des Cimentiers" was 115 francs per metric ton. This quotation is identical to that quoted by the "Union des Cimentiers" for the month of December.

Average wholesale prices in Belgium currency covering exports of cement are said to have been 180 francs f. o. b. Antwerp, during the month of January. Dollar quotations on exports to the United States, as quoted by the "Union des Cimentiers," were in the neighborhood of $9.50 per 24 sacks, which is a little over one ton. According to the prices given on individual invoices, however, it is apparent that the volume of the shipment governs prices to a large degree.

According to the invoices certified at the Brussels consulate during January the average price on cement shipped to the United States was $7.62 per ton, f. o. b. Antwerp, while individual prices ranged between $6.66 and $8.46 per ton. According to the invoice records of the Ghent consulate, the average price on cement shipped to the United States during January, was $12.38 per ton, c. i. f. Atlantic port. The original invoices on file at the Consulate General indicate that shipments of cement during January were made at $0.54 per bag, c. i. f. Los Angeles and at $0.57½ per bag, f. o. b. Antwerp. A number of large shipments were made to California at the quotation of $2.15 per 4 bags, c. i. f., which is approximately $12.55 per ton.

Production figures of cement in Belgium are not available, but it is apparent however, from the increased exports to the United States that there was undoubtedly an increase in the domestic production of this commodity. The United States, and particularly the Pacific States, offer an important market for Belgium cement, but the volume of exports to American ports can only be taken as a slight indication of the total production in Belgium. There is always a large demand for cement to be consumed domestically as the reconstruction of the industrial organizations continue to progress on a large scale. The housing crisis in Belgium also necessitates active efforts in order to increase the number of dwellings, and it is apparent, therefore, that a great deal of Belgian cement is consumed within the country.

CHILE

By C. A. Brooks

ASSISTANT TRADE COMMISSIONER, SANTIAGO, JANUARY 29, 1925.

The Compania de Cemento de Polpaico has been organized by a group of Chilian capitalists, assisted by the firm of Gildemeister & Co., to develop the limestone deposits at Polpaico Station, some 60 kilometers from Santiago on the rail line connecting the capital with the port of Valparaiso.

The new company is tentatively capitalized at 250,000 pounds sterling, which at a later date may be increased to 300,000 pounds sterling. Gildemeister & Co. has subscribed 40,000 pounds of the capital required and contemplate making a further investment.

The Cia. de Cemento Polpaico will employ the wet process of manufacture using the calcareous stone and clay found on its property. Engineers who surveyed and analyzed the raw materials supply announced that there is enough in sight to manufacture a minimum of 50,000,000 bbls. of portland cement.

Three equipment companies, including an American firm, submitted plans and bids on the machinery and auxiliary installations. The Polysius Co. of Germany, whose prices were the lowest, will be awarded the contract amounting to about 126,000 pounds sterling. This figure includes the cost of machinery and buildings. The plant will have a daily output of 1,000 bbls. It is understood that the successful bidders will accept a part of their payment in shares of the cement company.

With the new plant producing 300,000 bbls. of cement annually plus the production of the Mellon Co., which in 1923 turned out 431,000 bbls., Chile will be practically able to meet her cement requirements with a nationally made product. While the output of the Palpaico company will seriously affect the importation of cement their bag and container requirements will stimulate the trade in these commodities.

The provisional directorate of the Cia. de Cemento de Polpaico is composed of Alberto Bascunan Montes, president; Augusto Thiermann, vice president; Carlos Barrolhet, Carlos Balmaceda S., Julio Pereira I., Camilo Donoso D., Walter Piza, directors.

Gildemeister & Co. of Santiago has been acting as manager of the new enterprise.

SCOTLAND

A very interesting report on the manufacture of a new cement of gypsum has been received by the Minerals Division and which may be had by requesting Report No. 159,970, by Clerk Paul F. Darcy, American Consulate at Glasgow, Scotland, under date of January 22, 1925.

SWEDEN

By Maurice Angland

CLERK, STOCKHOLM, JANUARY 23, 1925

The exports of Swedish cement in December, 1924, were somewhat larger than for the corresponding month of 1923. However, the total exports of cement during 1924 were only two-thirds of the amount exported during 1923. The quantity of cement exported from Sweden during November and December of 1924 and for the entire year of 1924, with corresponding figures for the year 1923, are shown in the following table:

	Total Exports of Cement	
	1923 Kilograms	1924 Kilograms
November	8,356,873	8,778,690
December	458,495	584,742
Total for year	90,530,001	63,287,697

Figures giving the separate countries of destination and amounts of each are not yet available from official statistics but dealers state that South American countries are the chief importers of Swedish cement. There were no exports of cement from Sweden to the United States declared at the American Consulates in Sweden during December, 1924. The total declared export of cement to the United States in 1924 was only a small fraction of the amount declared in 1923. The figures are 1,880,909 kilograms in 1924 as against 27,912,699 kilograms in 1923.

The domestic wholesale price of cement has remained about the same since the beginning of October, being about an average of 10.50 crowns ($2.81) per 170 kilograms, net. The export price in quantities has also remained unchanged at 5.40 crowns ($1.45) per barrel of 170 kilograms, net, f. o. b. Swedish port.

Figures giving monthly production of cement in Sweden are not available, but from information gained through interviews with the trade and the steady price of cement on the local market, the demand seems to be good and it is stated that the factories are running at full capacity with orders for a few months ahead.

Preliminary official statistics on Sweden's industrial production in 1923, published by the Swedish Board of Trade, give 392,602 metric tons produced in 1923 as against 366,231 metric tons for 1922.

GREAT BRITAIN

By Robert B. Macatee

CONSUL, LONDON, JANUARY 27, 1925

The quantity of cement exported during December, 1924, as indicated in the official "Accounts relating to the Trade and Navigation of the United Kingdom" amounted to 47,224 tons, valued at £114,823. The countries of destination are given as follows:

Exported to	Tons	£
Netherlands	5,413	8,393
Brazil	4,270	9,690
Argentina	5,059	11,511
Irish Free State	5,930	17,853
British South Africa	2,090	4,586
British East Indies	11,116	28,066
Australia	1,645	4,605
New Zealand	401	1,069
Other countries	11,310	29,050
Total	47,224	114,823

The United States is not shown as a country of destination. The shipments of cement from Great Britain to the United States during December were as follows:

London........402½ tons valued at $5,292.

There has been no change in the wholesale or retail prices of cement during the month of December. Export prices of cement are not available, but the following figures are arrived at by dividing the quantity of cement exported to the several countries by the value in each respective case:

Exported to	Value		
	£	*s.*	*d.*
Netherlands	1	11	0
Brazil	2	5	4
Argentina	2	5	7
Irish Free State	3	0	3
British South Africa	2	4	11
British East Indies	1	10	5
Australia	2	15	11
New Zealand	4	0	0
Other countries	2	11	4

The average value per ton (i. e. total value divided by total weight) is £2. 8. 7d.

THE NETHERLANDS

By P. J. Van Hees

CLERK TO TRADE COMMISSIONER, THE HAGUE, JANUARY 28, 1925

Although the making of bricks and tiles constitutes an important branch of Dutch industry, employing some 11,000 hands, the manufacture of cement only comprises a few factories of which the output is relatively insignificant and too small to play a role in the domestic market. Hence, the Netherlands has to rely on foreign sources for this commodity. The Dutch trade in cement is divided among Belgium, Germany, Great Britain, and Switzerland. A constant struggle goes on between these countries for the supremacy of the Dutch cement market.

Before the war, Belgium and Germany practically monopolized the trade. During the first post-war years, French, Austria, and even Polish cements were being introduced with more or less success, depending on the exchange rates of the country of origin. After this period of transition, however, not only the pre-war suppliers tried to regain their old footing, but the Swiss and English manufacturers also endeavored to capture a share of the Dutch market.

Belgium has again attained its former position. Due to favorable internal conditions, low freight rates and a depreciated currency, the Belgium producers were able to book sales at prices below those of their German and Swiss competitors. Although at present the German cement syndicates sell at prices below domestic quotations, they are not able to oust their Belgian competitors. For the English and Swiss producers, the freight charges are an important factor in determining the Dutch selling price, nevertheless they have been able to meet competition in several instances. Naturally the Dutch consumer takes advantage of this complicated situation and buys cement on the local market at prices which are generally below the current quotations abroad. In the case of German cement, for instance, the f. o. b. Rotterdam quotations are 30% lower than the local German f. o. b. factory prices. It is generally anticipated, however, that a price increase in cement is imminent, due to the fact that the quantities of cement shipped into the Netherlands will probably decline with the approach of the spring season, when huge quantities will be required by various countries of origin to carry out their extended building programs and therefore the exportable surplus will be limited.

The sale of cement in the Netherlands is handled by the Nederlandsch Cement Syndicaat (Dutch Cement Syndicate), with offices at The Hague. It seems, however, that difficulties have arisen between this syndicate and the German manufacturers regarding the price policy which is being followed by the former. It also appears that the syndicate is connected with a second organization to which the sale of Belgian and French cement has been entrusted and whereof the Germans do not approve.

In view of the foregoing, it is very probable that the Dutch

Cement Syndicate will cease to exist within the near future. Attempts are being made to come to an agreement on a new basis. In case these negotiations fail, the sale of cement in the Netherlands will be free which may be some interest to American cement producers, i. e., if the present status of the market undergoes a radical change.

Norway

By S. Bertrand Jacobson

Consul, Oslo, January 23, 1925

The following table shows the exports of cement from Norway for 1924, from May to November, inclusive:

	Total Exports Tons	Exports to the United States Tons
May	16,695	7,503
June	21,560	2,873
July	18,884	6,512
August	10,143	4,874
September	22,390	11,867
October	15,304	8,485
November	23,723	7,626

Domestic wholesale prices (from producer to wholesaler) per 3 bags or one barrel of 170 kilograms (374 lbs.), f. o. b. Oslo, including container during November were as follows:

	Kr. 17.50	
less	.75	Profit
	Kr. 16,75	
less	.42	2½%
	Kr. 16.33	

From wholesaler to contractor add 90 ore per barrel. The bonus is the same as for the previous months, 65 ore per 170 kilograms for sales of 25,000 bbls. or more.

Austria

By Elbert Baldwin

Assistant Trade Commissioner, Vienna, January 11, 1925

Austrian cement production is estimated at 340,000 metric tons during the year 1924. This amounts to only 35% of the pre-war production of some 800,000 metric tons, and compares with current domestic cement requirements of 400,000 metric tons, leaving 60,000 metric tons to be imported, Poland (40%), Czechoslovakia (28%) Yugoslavia (14%), Hungary (9%), and Italy (6%.)

Imports are due partly to price factors, as in the case of Poland, and partly to lower transportation costs where the point of consumption is nearer a foreign than a domestic point of production. Reciprocal Austrian exports are hindered by tariff barriers. The Czech duty of 27 Cz. crowns per 100 kilograms is equivalent to 75% ad valorem; the Hungarian duty of 1.85 gold crowns per 100 kilos to 35%. The Austrian duty of 0.80 gold crowns is equivalent only to 16% at the present price levels, 75,000 to 80,000 Austrian crowns per 100 kilos ($1.07 to $1.14 per 220 pounds).

The domestic market suffers for lack of urban building under conditions of restrictive rent laws and high costs of capital but has been favored by development of hydro-electric power houses, electrification of the railways, and the repair of farm buildings neglected during the war and since.

Germany

By Cornelius Ferris

Consul, Stettin, February 7, 1925

The manufacture of portland cement is an industry indigenous to the Province of Pomerania, abundant supplies of chalk being found on the Island of Rugen, and clay on the banks of the Oder River, convenient to Stettin, in the neighborhood of which the first cement factories in Germany were erected. The Stettin Portland Cement Factory at Zullchow was established in 1853-55, and in 1856 at Lebbin; the Portland Cement Factory Stern at Finkenwalde in 1862; the Portland Cement Factory Quistorp at Wolgast in 1889. These are still the leading cement factories in the Province of Pomerania.

The raw material at first used was prepared (silt) chalk; later crude chalk from Wollin (near the mouth of the Oder River) and blue septarienton from Curow and Zullchow. The fundamental principles of the process have been the same from the beginning of the industry to the present time. The chalk is worked up and cleansed in revolving drums. The water is drawn off, leaving a thick chalk mud which is stirred as uniformly as possible, and a precise quantity of burnt clay is added. The mass is well mixed, then burnt and finally powdered. Formerly the burning was done in furnaces with alternate beds of coke and cement. Now it is done in great revolving ovens. In the modern revolving ovens with coal dust firing, a pasty mixture of chalk or lime and clay is obtained. After a drying process this is subjected to a stronger heat, coagulating at a temperature of 1400° (presumably Celcius). Passing down an inclined way to a rotating cooling drum, it is cooled by a current of air. The burnt cement, in the form of a hard dark grey mass, is left for some time in a ventilated store room. It is next broken up in stone-breaking machines, and then ground to the finest of powders.

The aggregate production capacity of the four principal concerns is about 24,000,000 casks of 180 kilograms, gross, each, of cement annually. The industry gives employment to about 1,300 men.

The sale of cement produced by the factories in Pomerania is carried on through the Syndicate of the North German Cement Association (Syndikat des Norddeutschen Zement-Verbandes). The principal exportation is to the Baltic Sea countries.

Business conditions at the beginning of 1924 were bad on account of a protracted period of frost, which impeded the construction of buildings. Business was also unfavorably affected by the money stringency, which prevented important building undertakings. During the summer months inquiries for cement were satisfactory, reaching their highest point in October. In November there was a marked decrease in inquiries as a result of negotiations over the renewal of the cement syndicate; consumers anticipating a fall in prices in case of a failure of the negotiations. During the year prices have fallen slightly, as a result of a decrease in freight rates and the price of coal. A slight increase in inquiries is expected in 1925.

By Paul Bowerman

Vice Consul, Berlin, February 10, 1925

During December 1924, German cement exports totaled 49,082 tons as against 42,400 tons in November, an increase of 6,682 tons or 15.7%. Detailed statistics covering Germany's cement exports in December 1924, listed according to countries of destination, together with comparative figures for the previous month, are shown in the following table:

German Cement Exports During December

Exported to	November Metric tons	December Metric tons
Netherlands	12,289	13,050
Norway	343	277
Austria	10	1
Polish Upper Silesia	25	17
Lithuania	634	9
British South Africa	866	1,137
British India	2,288	467
Dutch East Indies	1,164	1,147
Brazil	7,128	8,002
Chile	1,453	3,356
Ecuador	1,003	667
Peru	1,734	260
Other countries	13,463	20,692
Total	42,400	49,082

Wholesale prices during December, f. o. b. at the various cement manufacturing centers, remained unchanged over November.

The following special prices are of interest:

High grade cement, with a pressure capacity of 250 kg/qcm after three days, costs 12 gold marks per ton extra.

Siccofix, costs 8 gold marks per ton extra.

Blast furnace cement, costs 3 gold marks per ton less.

Iron portland cement, costs 2 gold marks per ton less.

Denmark

By Howard F. Withy

Consul, Copenhagen, February 8, 1925

Statistics covering the quantity of cement exported from Denmark during the month of December, 1924, are given below, with corresponding figures for the month of November:

Exported to	November (100 Kgs.)	December (100 Kgs.)
Germany	1,187	1,763
Great Britain	24,996	4,519
Finland	4,737	5,103
United States	5,500	2
Porto Rico	.....	28,339
Cuba	.....	6,187
West Indies	28,900	87,363
Peru	5,095	850
Venezuela	3,783	5,525
Brazil	91,043	28,658
Argentina	43,301	149,257
Chile	16,810	17,350
China	10,170	8,450
Straits Settlements	14,915	20,280
British India	4,916	3,400
Portugal	6,714	.....
Colombia	4,520	.....
Other countries	3,155	7,158
Total	272,077	374,204

So far as this office has been able to determine the f. o. b. price, during December, at Aalborg, was $11.58 per ton, while minimum and maximum prices to wholesalers were $13.50 and $13.95 per ton respectively, depending on the transportation, storage, insurance, and other charges.

When Dynamite Explodes

By Charles S. Hurter

Big dynamite blasts are more and more frequent items of news. Charges of dynamite are buried deep in the face of a cliff, an electric switch is turned, there is a deafening roar, and thousands of tons of rock come crashing down. What, the inquiring observer asks, produces this explosion? What actually happens when dynamite explodes?

To answer this question it is necessary to explain briefly what dynamite is. Reduced to its essentials, dynamite is a mixture of nitroglycerin with wood meal and nitrate of soda or nitrate of ammonia, or both. Nitroglycerin, in turn, is composed of several different elements namely: carbon, hydrogen, nitrogen, and oxygen, the molecules of which are grouped in such a way as to form a heavy, oily, yellow liquid. Now these same molecules are capable of arrangement in other groups to form several different substances instead of the one, and the bonds which hold them together in the particular arrangement which makes nitroglycerin are very weak.

Consequently, when the electric current sets off the detonator imbedded in the dynamite and this imparts a sharp shock and very high temperature to the nitrogylcerin, the bonds between the molecules which compose the nitroglycerin break down. The nitrogen and some of the oxygen remain free—both of them, gases—while the other molecules instantly combine to form two compound gases, carbon dioxide and water vapor. The breaking down of the nitroglycerin and rearrangement of its molecules generates a great deal of heat—enough to raise the temperature of the gases to 6300° F. or thereabouts—and this high temperature causes the other ingredients of the dynamite to decompose into gases, or to burn, with the release of still more heat. All of this takes place in a single instant and the highly heated and rapidly expanding gases, which would normally occupy a much greater volume than the dynamite, exert a sudden tremendous pressure on the walls of the bore hole. The rock gives way and the escaping gases set the air into violent vibration. To the beholder, the explosion consists of the roaring noise and the rending of the rock, but in reality these are only the audible and visible results of the rearrangement of the molecules of the dynamite when subjected to a shock from the detonator, this conversion of the nitroglycerin and other ingredients of the dynamite into gases constituting the actual explosion.

Demand for New Brunswick Lime

A noticeable decrease in the demand for lime in New Brunswick was recorded late last fall. From the United States, the orders slackened to a point where they were about 30% less than in the spring. The decrease was attributed to a reduction in building construction.

More of the companies will increase production. Lumbering companies that have not manufactured lime will enter the industry. The manufacture of lime was started as a side line by some of the lumbering companies in eastern Canada, and, owing to the heavy slump in the lumbering industry, the manufacture of lime has proved during the past three years to be the only profitable operations of the companies. Hence the intention to enlarge the production, on the part of some of these already identified with the lime industry and the plans for embarking on lime production, by others who had not entered.

The Clairmont Lime Co., of Terryburn, N. B., has been operating the plant of the company at Terryburn at nights owing to rush orders. This company is controlled by C. H. Peters' Sons Co., of St. John, N. B.

Hydro electric power as developed in various waters of eastern Canada has served to lower the cost of operation of some of the lime manufacturing plants. There is the added advantage of lighting the plants by electricity and this permits of operations at night, and on dark days. The current is obtained by erecting a supply wire connecting with the main feed wire from the hydro station. At present, a hydro station at Musquash River is supplying lime manufacturing plants in that section and as far away as 100 miles, with electric current serving for power and light. The cheap power and light have been welcomed by the lime men.

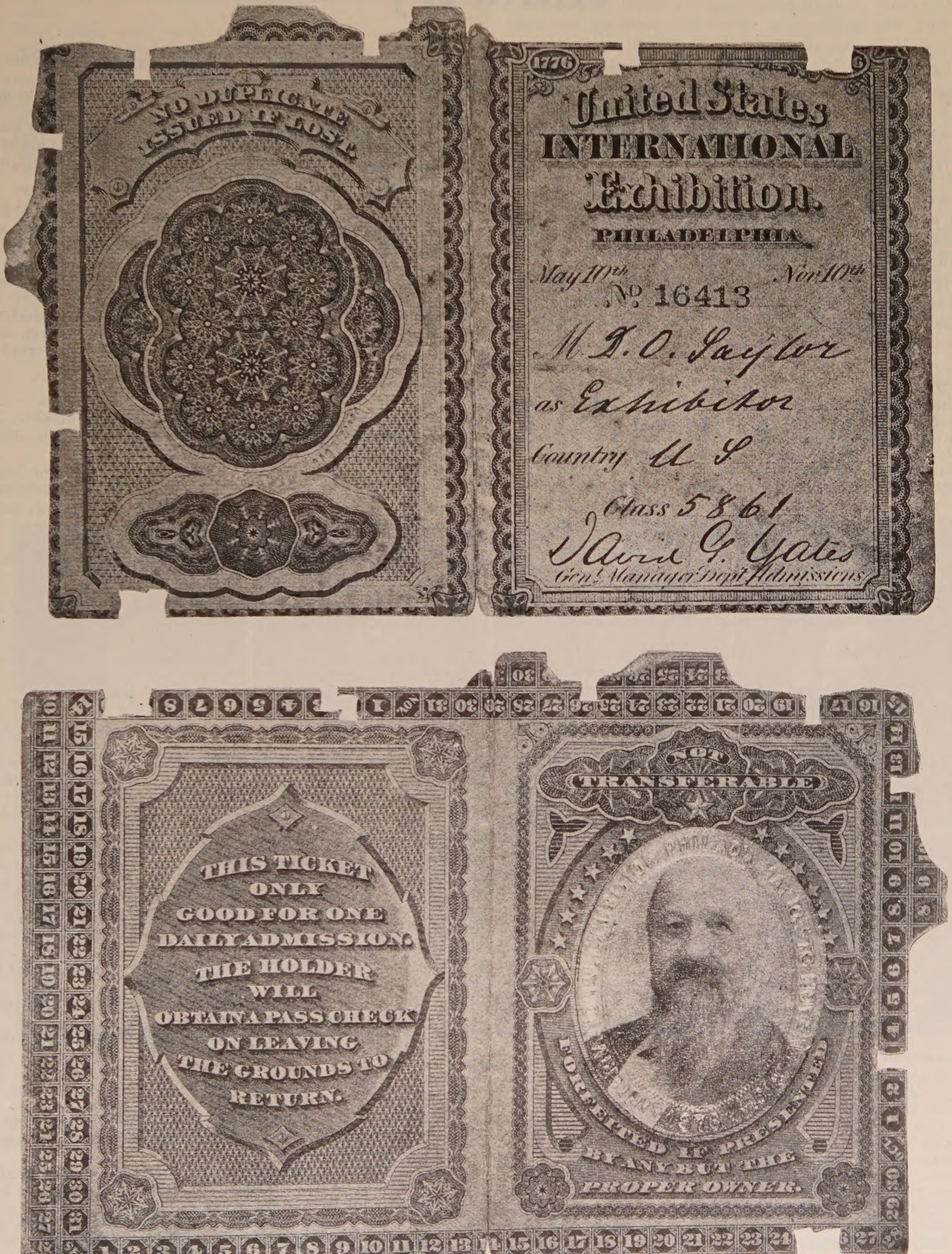
Randolph & Baker, of Randolph, N. B., after 50 years of lime manufacturing, were manufacturing more lime in 1924 than ever before. This firm, the founders of which are now both dead, have greatly improved their methods of manufacturing during the past few years. They have also substantially improved quarrying methods, using the most modern methods of blasting. The Randolph & Baker lime deposits at Randolph and vicinity are located on the west bank of the St. John River. Most of the lime is loaded on schooners at the firm's wharf, and transported directly to United States ports. The balance is shipped by rail, but as the plant is situated about two miles from the main line of the Canadian Pacific, a tedious highway haul is necessitated. The late Charles P. Baker, who died several years ago, and who was general manager and chief partner in the firm for more than 20 years, was largely instrumental in developing the lime manufacturing activities of this concern. The firm's own magazine for explosives was built at Randolph. Roads were also built through the quarries, and individual explosive stations built at each of the quarries.

The Snowball interests of Chatham, N. B., have been shipping large quantities of lime to United States ports by schooner from Chatham. All of the lime producing concerns, operating at the mouth of the Miramichi river have been operating steadily and to capacity, and 70% of the lime produced has been exported to the United States. But for the United States market, there would be very few lime plants in operation along the Miramichi. This is applicable to the entire eastern Canada territory also. It is estimated that approximately 65% of the lime manufactured in the eastern provinces is shipped to the United States, and at least 50% is sent by schooner, owing to the radical difference in rates, between rail and water. The shipments of lime to the U. S. are holding up better than expected, there being apparently a stiffer demand for lime than for the Canadian lumber.

An Interesting Record

The accompanying illustration shows a ticket to the United States International Exhibition at Philadelphia May 10 to November 10, 1776, issued to David O. Saylor as an exhibitor for the United States. This ticket was sent to Concrete by George S. Saylor, David Saylor's son.

David O. Saylor is known as a pioneer in the American cement industry, the Coplay Cement Co. having been incorporated in 1866 with David Saylor as its president. In 1876 Saylor's portland cement was granted an award at the Philadelphia Centennial Exposition for its superiority over imported cements.



NO DUPLICATE ISSUED IF LOST.

1776

United States
INTERNATIONAL
Exhibition.
PHILADELPHIA
May 10th Nov. 10th
No 16413
Mr D. O. Saylor
as Exhibitor
Country U S
Class 5861
David G. Yates
Gen'l Manager Dept. Admissions.

THIS TICKET
ONLY
GOOD FOR ONE
DAILY ADMISSION.
THE HOLDER
WILL
OBTAIN A PASS CHECK
ON LEAVING
THE GROUNDS TO
RETURN.

NOT
TRANSFERABLE
FORFEITED IF PRESENTED
BY ANY BUT THE
PROPER OWNER.

David O. Saylor's ticket to the United States International Exhibition at Philadelphia, Pennsylvania, 1876. The ticket bears a small photograph of Mr. Saylor

Fatal Accidents in the Cement Industry

The following list gives the fatal accidents as listed by the Accident Prevention Bureau of the Portland Cement Association for the year 1924. The *Accident Prevention Bulletin* points out in the January-February, 1925, number that not all of the blame should be put on the man who is dead. It may be that the question, "Should anyone have prevented him from doing what he did?" holds someone alive today morally responsible or it may that, "Was he trapped by the non-observance of the regulation on the part of another?" is the question that carries the solution.

It is pointed out that the following list of accidents should be studied carefully and that all of the men should know how others have died so that those alive today may learn how to prevent at least such accidents as are repeated from year to year.

Machinery

1. Cleaning choke in dryer feed. Clothing caught in unprotected gear.
2. Sitting on screw conveyor box. Coat-tail caught in screw.
3. Clothing or air hose used in cleaning caught on smooth line shaft about 3 feet from floor.
4. Exact cause not known. Wound in head indicates man was struck by some moving machinery or may have fallen into a conveyor pit where he was found beneath a pulley.
5. Arm caught between pulley and conveyor belt.
6. Coat caught on crusher coupling.
7. Boiler tube burst.
8. Helper on locomotive crane caught between moving and stationary party of crane.
9. Feeding coal into screw conveyor. Stepped through bar grating.
10. Caught in kominuter gear. The man being a sweeper, had overheard miller and repair man speak of some repairs to be made on the mill, which was down, and in his anxiety to help he started to do some work around the gear without instructions from anyone and without notifying miller and repair man. The mill was started shortly after by the miller.
11. Oiler's clothing caught on shaft.
12. Scraping coal into conveyor, man was hit by bucket of the coal drag operated by other employee.
13. Gear at top of elevator broke and fell on man underneath.
14. Cleaning machinery while in motion. Hand caught in gear.
15. Repairing elevator—a pipe was placed through elevator sprocket to hold elevator in place. Pipe was not taken out after repairs were made and when elevator was started pipe struck the man and threw him from platform.
16. Crane boom broke and fell on man.
17. Man stepped on end of rock car. Electric shovel swung around to get dipper of rock. The man was caught between car and rear of shovel.
18. Caught in belt conveyor.
19. Crawled under clay conveyor belt to remove frozen clay from idler. Arm caught between belt and pulley.
20. Standing with one foot on shaft of motor and other foot on under side of belt while repairing roof over motor. The motor was started. The switch controlling this motor is equipped with locking device. The man engaged in the repair depended on the instructions he had given the foreman of the department not to start the motor—this instruction was in turn conveyed by the foreman to the man whose regular duties included the operation of this motor. This man frankly admits that he received the instructions but forgot them. There were four other men present who undoubtedly knew that the switch was not locked. In addition it was brought out that it would have been very easy to make the repair on the roof without even shutting down motor by using a ladder or some simple platform which could have been erected.

Slides in Bins

1. While cleaning rock-storage bin, he undermined a large piece of frozen rock which fell on him.
2. While in cement bin a slide covered him. He had a rope, but neglected to tie it around his body. Helper at top of bin had stepped away to get a piece of board.
3. Caught in slide of crushed rock which he was trying to make flow.
4. Covered by crushed stone in bin. The report further states, "at least two men are supposed to be working in the bin at the same time, but one of the men had gone for a drink and when he returned the slide had taken place."
5. Covered by slide of crushed stone in bin.
6. Was shoveling stone in bin and was using safety belt and rope, but had allowed so much slack in the rope that when slide took place the man was carried with it. A second slide hit the man with full force and broke the rope. A man outside the bin watching the work did not take the precaution of having the life line taut.
7. Man was standing on a pile of stone near stone bin which was being emptied for repair. As hole was cut between main storage and mill bin the stone started to slide and covered the man.
8. Covered by slide of crushed rock.

Falls into Bins

1. Fell into rock bin in raw storage building—neck broken.
2. Was found head down at bottom of clay bin—neck fractured.

Coal Dust Explosions

1. Compressed air being blown into powdered coal bin to clean it out. There had been fire in the bin. As the dust was stirred up by the compressed air, smoldering fire, still present, caused an explosion.
2. Same accident as above.
3. Coal in dryer caught fire, causing an explosion which ignited clothing of the firemen.

Premature Explosions

1. Loading well-drill holes with several other men when a premature explosion took place.
2. Caused by the explosion of dynamite that as far as can be ascertained did not all explode when a shot was made two hours previously.
3. Premature explosion while loading block-holes.

Hit by Stones from Quarry Face

1. Thaw and frost released stone, which rolled down the bank and hit man.
2. A piece of frozen clay and rock broke loose from top of face.
3. Was barring down stone from a bench about 24 feet from floor. Stone on which man was standing broke or slid under his weight, causing him to fall about 10 feet, other stones rolling over him.
4. Was cleaning stone from around steam shovel when a stone rolled down from quarry bank and hit him on leg, facturing it in two places. The man died later in the hospital from tuberculosis, but the company has been held responsible.
5. Went up bank to shoot big stone. Bank gave way and a big stone rolled over him. He had been warned of the danger by two other workmen.
6. In the act of springing a hole, ground slid out from under him carrying him about 200 feet down side of hill.
7. While on ledge barring down stone, a large portion of stone broke loose and fell on him.
8. Was helping light mudcap shots when a large stone fell down from quarry face and hit man on head.

Quarry Cars

1. Was caught between two cars while assisting in switching.
2. Hit by car which tore loose from cable on incline.
3. A cut of empty cars coming down grade side swiped rear end of engine and tore out four stud bolts. Fireman was scalded by escaping steam.
4. Empty stone car had been released from cable and was running by momentum in full view of man who stepped right in front of it attempting to cross track.
5. Crawled under cars to protect himself from blast. Cars were being spotted for shovel and passed over his body.
6. Connecting water hose to pipe on locomotive to get water to steam shovel when rock fell off stone car and hit him on head.

Repair and Construction

1. Was dismantling old building. Walked across roof which fell, allowing man to fall 35 feet. This man had been employed only one hour before he was killed.

2. Was standing on top of kiln helping to hoist a smoke ring. The smoke ring was being hoisted from the floor, but when it was lifted about five feet it tore loose from its fastening, causing the man who had hold of the hoist rope to fall to the floor.
3. While assisting stack erector to build scaffold preparatory to taking down an old stack, a 2x6 was knocked from roof, striking man on head as he was coming up ladder.
4. Was working on scaffold attached to deck of movable forms. Scaffold broke, causing man to fall 42 ft. onto concrete floor.

Electrocution

1. Man was found lying on roof in contact with high tension wires.
2. Electrician came in contact with live parts while working on switch.
3. Man's body was found behind switchboard where he had apparently crawled to sleep, pulling the door shut after him.
4. While climbing from top of traveling crane to the bottom flange of the crane girder he came in contact with electric wires.

Drowning

1. Men were on raft to inspect water intake in lake. Raft sank, throwing all men into the lake. Two of them reached shore but the third stayed behind.
2. One of the men in above accident who had reached shore gave up his life attempting to save the man who was left behind.

Blood Poisoning

1. Was repairing cab on dinkey and got splinter in finger. Kept working for five days when blood poisoning set in. Died in the hospital a week later.

Cause Not Known

1. Death caused by concussion of the brain. The man was found lying near motor with head bruised behind ear.

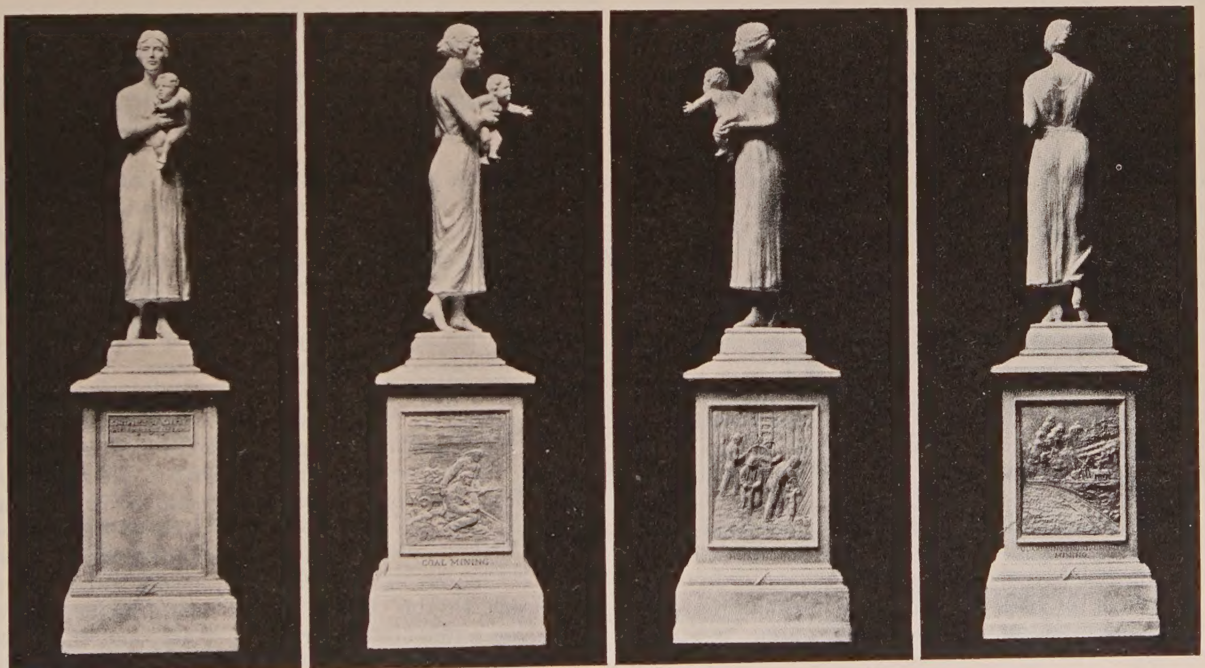
That the above 62 fatal accidents occurred at 44 separate plants is pointed out by the Bureau. During the year, it received accident reports from 118 plants in the United States, Canada, Cuba and South America, 74 of which did not have any fatalities. Of the 62 fatalities, 4 occurred at one plant, 2 plants had each 3 fatalities, 11 plants had 2 each and 30 plants one each. All the men were killed in separate accidents except in two cases, 2 men were killed in one coal dust explosion, 2 men met with death from drowning at the same time.

Frequently there is a decided tendency to jump at conclusions and to blame too many accidents to new men. The following gives the number of fatalities for various periods of employment before the accident:

	Fatalities
Less than 1 week	3
More than 1 week, but less than 1 month	2
More than 1 month, but less than 3 months	2
More than 3 months, but less than 6 months	10
More than 6 months, but less than 1 year	10
More than 1 year	31
Not given	4
	62

Eighty-eight per cent of these men had been employed more than three months and 50% of the men had been employed more than one year. Surely we cannot rest assured that the man long in the service is therefore able and willing to recognize dangers and to take proper precautions.

The Explosives Engineer Trophy



The Explosives Engineer Trophy (Left to Right)—Sentinels of Safety; The Coal Mining Panel; The Metal Mining Panel; The Quarrying and Open-Pit Mining Panel. It portrays in bronze, a mother and child greeting the father upon his safe return from work. The names of the mines and quarries winning the right to hold the trophy for a year will be engraved on the pedestal

A National competition under the auspices of the United States Bureau of Mines to promote safety in mining and quarrying has been announced by the *Explosives Engineer*, Wilmington, Delaware. A trophy, protraying a mother and child greeting the father upon his safe return from work was conceived and executed by Begni del Piatta, the designer of the Navy and Marine Memorial, Washington, D. C. One bronze cast of this will be awarded for a year to the coal mine having the lowest accident rate during 1925; another will go to the metal mine with the best record and a third to the winning quarry or open-pit mine. Cement plants that operate quarries should be interested in this competition.

In each instance, the holder of the trophy may have a replica made and erected permanently on the mine or quarry ground. Every employee of the winning mine or quarry, will receive a certificate of honor.

The award will be made each year by a jury governed by rules prepared in conjunction with the Bureau of Mines.

RULES GOVERNING THE AWARD OF THE EXPLOSIVES ENGINEER TROPHIES

1. The Explosives Engineer Trophies will be awarded annually at the First Aid Meet conducted by the United States Bureau of Mines. They may be retained by the winners for one year.

2. Those eligible to compete for the Trophies are companies operating a coal mine employing 50 or more men underground, a metal or other mine employing 50 or more men underground, or a quarry or open-pit mine employing 25 or more men in the pit. Because of the limited amount of office help available in the Bureau at present, the contest during the first year will be limited to the 500 mines and quarries meeting the above requirements, who first notify the Bureau of Mines of their intention to regularly report the necessary informaton.[1] A separate award will be made to the winner in each of these three groups.

3. The winner in each of the above three groups will be the mine or quarry having the smallest loss of time from all classes of accidents in proportion to total number of hours of work performed. For computing the loss of time from any accident, the Standard Scale prepared by the International Association of Industrial Accident Boards and Commissions will be used.

Accidents ordinarily classified by the Bureau as due to explosives shall carry double penalty.

Mine explosions directly traceable to the use of explosives are included under explosives accidents for the purposes of this award.

4. Data for determining the winners shall be obtained from a complete record of all lost-time accidents furnished by the operating company to the United States Bureau of Mines. This information may be submitted either on "special study" forms supplied by the Bureau or on other forms giving all the necessary data. Reports should show the number of calendar days (not work days) of the injured man's disability. Permanent injuries and deaths will be rated according to the scale of the International Association of Accident Boards and Commissions.

The accident reports shall cover the complete period of operations during the calendar year preceding the First Aid Meet at which the award is to be made. To be eligible, the mine or quarry covered by the reports shall have been in operation for at least 150 days during the year, and shall be a user of explosives. (For this contest a user of explosives shall be defined as a company consuming not less than 10,000 pounds of explosives during the period to which the award relates.)

5. In determining the winner, the Jury of Award shall have authority to choose between all mines or quarries whose accident rate shall be within one-tenth of a point of the lowest figure in each of the three above groups. Should the records of two or more contestants fall within this limit, the Jury's selection shall be governed by a comparison of natural conditions and the scope of the safety activities at the mine or quarry.

6. Companies operating more than one mine or quarry shall furnish reports for each, as the Trophy will be awarded to the individual mine or quarry making the best record in each of the above three groups.

7. In addition to the Trophy awarded to the company, each employee at the winning mine or quarry will receive a certificate of honor.

8. The above rules shall govern the first awards of the Trophies. The rules governing later awards may be revised as experience shows to be advisable.

Progress over preceding records will probably carry weight in determining winners in succeeding years. These progress records will be based on previous reports furnished to the Bureau of Mines.

The Bureau of Accident Prevention and Insurance of the Portland Cement Association has suggested to the Bureau of Mines that inasmuch as all cement plant quarries would be eager to enter the competition, the reporting of accidents to the Bureau of Mines from the cement industry could be simplified considerably if the Association office reports all cement quarry accidents by making copies of the accident reports which are sent to it from member companies, according to the *Accident Prevention Bulletin*, if satisfactory to the Bureau of Mines. A special letter to cement plants will be issued by the Bureau asking the permission of the companies to follow this procedure.

Packing Cement for Export

Effective methods used in packing portland cement for foreign shipment are described in a report just issued by the Commerce Department. Particular reference is made to the practice of a cement manufacturing company which is extensively engaged in export business. This company ships its cement in both barrels and bags, containing 120 kilos (124 lbs.) and over, made in its own plant.

In the making of its barrels there are used from 16 to 18 wooden staves (depending upon the width) and ½-inch thickness, usually of oak, pine or chestnut. The heading is 16 in. in diameter, reinforced by head stiffeners, or what are known as export strips. All barrels are hooped with four steel hoops.

The staves when received in carload lots are placed in large driers. Drying requires several days, depending on the condition of the staves when received. After drying, all staves are taken to the cooper shops and put through crozing machines, which chamfer the ends and cut the grooves that hold the heads in place. They are then delivered to the setting-up or raising machines, where they are set up in a circular form and the head is placed in a form at the bottom. The top is then drawn together by means of a wire frame and the head hoops placed around it, after which the barrel is placed over a heater, which keeps it in shape and helps further to dry it.

From the heater the barrels are sent to the tappers, who slip on two bilge hoops. These tappers also examine the barrels to see if there are any broken staves, knot holes, or other defects, and if any are found defective the barrels are returned to the setting-up machines for replacement. After inspection the barrels are run through the trussing machine, where the hoops are automatically driven in place, and the barrel is made tight. Here again any barrels that develop defects are thrown out. Beyond this machine are the trimmers, who place the export strips on the outside of the end of the barrel which is headed. This export strip is nailed in place and further strengthened by a piece of angle iron on each end which extends over the edge and is securely nailed.

In this condition the barrels are transferred to the packing houses to be filled with cement, after which the second head is put in place and another export strip fastened in a similar manner to the one previously put on. Here also head liners are nailed in place and all marking for shipment is done.

The standard barrels of the company are absolutely uniform in size and the quality is as near perfect as is possible to make them, rigid inspection being enforced at all times. The barrels usually are made in sizes to meet the customers, needs, as well as inland transportation requirements of foreign countries. They are frequently made in 180-kilo size, with a gross weight of 400 lbs., or 376 lbs. net. This plant also is equipped to sell smaller packages of about 66 lbs., or the size of eight to a large barrel.

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[1] The Bureau of Accident Prevention and Insurance of the Portland Cement Association has requested the Bureau of Mines to make reservations for all cement plant quarries with quarries reporting accidents to that Bureau. The Bureau of Mines has granted this request.

Shipping Equivalents for Portland Cement

Gross Weight in Kilos	Weight in Lbs.		Gross Weight in Kilos	Weight in Lbs.	
	Gross	Net		Gross	Net
30	66	58	90	200	189½
36	80	72½	100	220	207½
45	99	91½	114	251	233½
46	101	93½	120	264	246½
50	110	102	150	330	313
57	126	117	160	350	330
70	154	144	170	370	348
75	165	156	180	400	376
80	176	165			

The company's bags are made of osnaburg, the material used varying in weight according to the customers' requirements. When requested, they are lined with waterproof paper and contain 94 lbs. net.

Cement for Colombia is packed in barrels of the usual size. Barrels should have iron "rolled" hoops at both ends, heavy ends or heads being reinforced with a crosspiece of wood nailed through rim and fitting into bevel of rim.

Many complaints of breakage and loss are due to careless handling by steamship companies in loading and discharging, the Commerce Department's manual states. Some shipments of cement recently have been received in Colombia with a total loss of 40% of contents. The method of packing as above set forth has given the best results in the past and is considered much better than the European method, the barrels being better on account of the rolled iron hoops and cross-braced head.

Cement is shipped to Venezuela in barrels only. The barrels are always of adequate strength, and the packing has been found as good if not better than the packing of similar goods imported from Europe. Uusually the weight per barrel is 180 kilos, but some American firms pack only 170 kilos to the barrel.

Traveling Slurry Agitator in Cement Plant

The traveling slurry agitator installed at the plant of the Glens Falls Portland Cement Co., Glens Falls, N. Y., and described in the February, 1925, Cement Mill Section of Concrete, was designed by the F. L. Smidth Co., New York City, and built in that company's shops. Attention has been directed by the designers to the fact that in the article already printed, the statement that the length and size of the tanks make it impractical to use the standard form of stationary paddles, would lead to the inference that the design of the agitator was caused by the design of the basin. On the contrary, the particular form of agitator used at the Glens Falls plant was specially designed as it was found that the system of one tank with a traveling agitator working in it, saved considerable in first cost where a large capacity of storage is required and in addition saved considerable power as compared to the h. p. necessary with the standard systems. In this case, the estimated saving is from 50 to 60 h. p. In addition, it was found there would be a great saving in repairs and upkeep as there are less working parts, less bevel gears, etc.

Details of the traveling agitator were worked out and the tank was built to conform to its use for the storage it was desired to obtain. It is the experience of the designers and builders that where a large storage of finished slurry is desired, there is no question as to the single basin with the traveling agitator being the cheapest arrangement from the standpoint of first cost, saving in horse power and saving in repairs.

The slurry is pumped in at one end of the basin and the overflow from the kiln feeder is returned at the other end. The composition of the slurry throughout the basin is absolutely uniform.

All of the engineering work in connection with the changing over from the dry process to the wet process at the plant of the Glens Falls Portland Cement Co. was done by F. L. Smidth & Co., and this traveling agitator is one of the devices installed in connection with the engineering work. The speed reducer installed on the carriage of the machine was purchased from Foote Bros. Gear & Machine Co., Chicago, Ill. An application has been filed by F. L. Smidth & Co., for a patent on the traveling slurry agitator.

Cement Statistics for February, 1925

Tables giving portland cement statistics for February, 1925, prepared under the direction of Ernest F. Burchard, of the U. S. Geological Survey, are based mainly on the reports of producers of portland cement. The February, 1925, totals include estimates for one plant. February production is slightly below that of one year ago and that of one month ago but higher than other preceding corresponding months; shipments are higher than for preceding Februarys and show an upward trend for 1925, and stocks exceed all earlier accumulations.

Production, Shipments and Stocks of Finished Portland Cement in February, 1924 and 1925, and Stocks in January, 1925 in Barrels

	1924	1925
Production, February	8,588,000	8,255,000
Shipments, February	5,933,000	6,015,000
Stocks at end of February	16,815,000	19,897,000
Stocks at end of January, 1925 (Revised)		17,656,000

Stocks of clinker, or unground cement, at the mills at the end of February, 1925, amounted to about 8,486,000 bbls. compared with 7,017,000 bbls. (revised) at the beginning of the month.

Production. Shipments. and Stocks of Finished Portland Cement, by Months, in 1924 and 1925, in Thousands of Barrels

Month	Production		Shipments		Stocks at End of Month	
	1924	1925	1924	1925	1924	1925
January	8,788	8,916	5,210	5,108	14,155	(a)17,656
February	8,588	8,255	5,933	6,015	16,815	19.897
March	10,370		8,995		18,189	
1st Quarter	27,746		20,138			
April	11,726		12,771		17,159	
May	13,777		14,551		16,403	
June	13,538		15,036		14,903	
2nd Quarter	39,041		42,358			
July	14,029		16,614		12,319	
August	15,128		16,855		10,666	
September	14,519		16,827		8,404	
3rd Quarter	43,676		50,296			
October	14,820		17,160		6,073	
November	13,141		10,289		8,928	
December	10,435		5,506		13,913	
4th Quarter	38,396		32,955			
	148,859		145,747			

(a) Revised.

Imports and Exports

The imports of hydraulic cement in January, 1925, amounted to 229,838 bbls., valued at $361,098. The total imports in 1924 amounted to 2,010,936 bbls., valued at $3,116,564.

The imports in January were from Belgium, 94,938 bbls.; Norway, 89,367 bbls.; Denmark, 37,991 bbls.; Germany, 2,800 bbls.; United Kingdom, 2,460 bbls.; France, 1, 662 bbls.; Virgin Islands, 322 bbls.; Japan, 250 bbls.; Canada, 48 bbls.

The imports were received in the following districts: Porto Rico, 38,313 bbls.; Philadelphia, 35,375 bbls.; Los Angeles, 33,432 bbls.; Hawaii, 30,038 bbls.; Florida, 24,187 bbls.; San Francisco, 20,619 bbls.; Oregon, 14,959 bbls.; New Orleans, 13,523, bbls.; South Carolina, 8,996 bbls.; other districts, 10,396 bbls.

The exports of hydraulic cement in January, 1925, were 71,596 bbls.; valued at $207,547 of which there was sent to Cuba, 34,052 bbls.; to the other West Indies, 1,085 bbls.; South America, 13,557 bbls.; Mexico, 12,736 bbls.; Central America, 7,740 bbls.; Canada, 58 bbls.; and to other countries, 2,368 bbls. These exports are exclusive of shipments to the following possessions: Porto Rico, 14,548 bbls.; Alaska, 2,540 bbls.; Hawaii, 361 bbls.

The statistics of imports and exports of hydraulic cement in February, 1925, are not available.

IMPORTS AND EXPORTS OF HYDRAULIC CEMENT, BY MONTHS, IN 1924 AND 1925 IN BARRELS (a)

Months	Imports		Exports	
	1924	1925	1924	1925
January	153,839	229,838	88,568	71,596
February	162,930	(b)	62,606	(b)
March	160,517	......	91,224	......
April	148,137	......	83,200	......
May	161,304	......	88,850	......
June	196,655	......	74,064	......
July	108,944	......	60,139	......
August	192,634	......	85,883	......
September	138,369	......	69,470	......
October	214,987	......	79,180	......
November	198,806	......	42,490	......
December	173,814	......	52,851	......
	2,010,936	......	878,543	......

(a) Compiled from records of the Bureau of Foreign and Domestic Commerce and subject to revision. (b) Imports and exports in February, 1925, not available.

A Quarry Blast at Signal Mountain

By R. L. McKnight

From the *Explosives Engineer.*

The Signal Mountain Portland Cement Co.'s plant is on the Dixie Highway, about 5 miles from Chattanooga. The site includes a mile of water front along the Tennessee River, from which point the company's holdings of about 400 acres rise gradually towards the side of the mountain.

The quarry contains 100 acres of limestone that runs 400 to 500 ft. deep and is expected to last nearly a hundred years. Since production started in November, 1923, the operating face has steadily been increased; originally 800 ft. x 30 ft., its limits are those of a cliff, 2000 ft. long by 175 ft. high. The overburden is negligible.

Drilling is done with electric well drills and Jackhammers. Bucyrus shovels, equipped with 3½-yd. buckets, dump into specially built 12-yd. all-steel side dump cars, built by the Easton Car and Construction Co. Fifty-ton Baldwin locomotives of the switch type haul the limestone to the crushing plant 2000 ft. away.

The clay field lies just across the Dixie Highway from the plant. Here, there is a 75-acre deposit of clay 25 ft. deep, which occurs in a solid bed and therefore requires no stripping. An Erie type B, ¾-yd. shovel loads the clay into Western air side dump cars.

When the limestone rock gets to the plant it enters a hopper above a No. 21 Allis-Chalmers gyratory crusher, which breaks it up to 8-in. size. Later, Jumbo crushers with a capacity of 300 tons an hour reduce it in one operation to 1½ in. or finer.

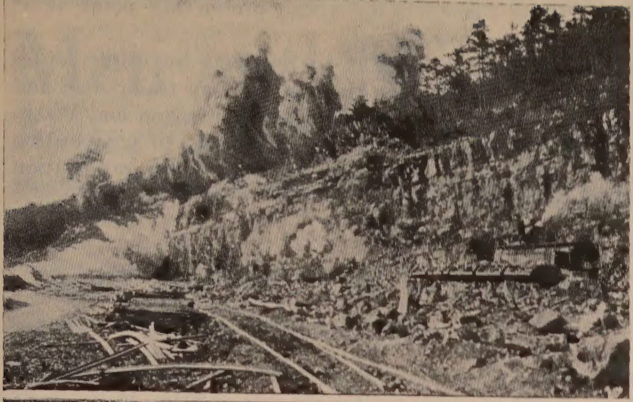
On August 21 of last year a large shot was made at the Signal Mountain quarry, which gave very interesting results. A total of 21,000 lbs. of explosives was used on the blast which broke about 60,000 lbs. Of this total, 8000 lbs. was

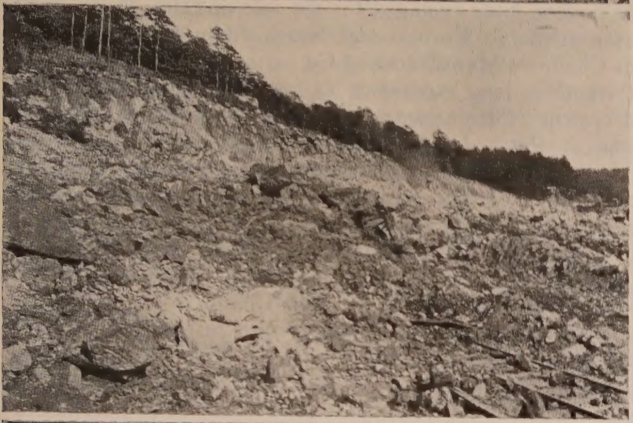
Details of Loading

Began Loading 1:15 P. M. 8/9/24 Finished Loading 12 M. 8/19/24 Time Fired 3.40 P. M. 8/21/24

Hole Number	Height of Bank	*Depth of Hole	Distance Between Holes	Burden		Calculated Solid Cu. yds. On Each Hole	Explosives Loaded						Stemming	Total Explosives Used
							Main Charge			Stemming	Deck Load			
				Rim	Toe				Height raised					
	Ft.	Ft	Ft.	Ft.	Ft.	Cu. Yds.	Lbs.	Brand	Ft.	Ft.	Lbs.	Brand	Ft.	Lbs.
1	75	78	25	30	32	1522	500	60 Gel.	38	. . . .	200	Spl. 1	20	700
2	75	29	20	30	32	....	50 300	60 Gel. Spl. 1	2	. . . .	. . . .	......	27	350
3	73	78	20	12	52	1849	750	60 Gel.	5	6	450	Spl. 1	17	1200
27	80	82	16	33	33	1603	200 550	60 Gel. Spl. 1	62	. . . .	......	......	20	750
28	80	82	16	33	33	1603	200 550	60 Gel. Spl. 1	62	. . .	. . . .	. . . .	20	750
29	35	25	12	8	8	88	150	Spl. 1	12	. . . .	......	......	13	150

*The holes were 5-⅝″ in diameter and made with a Keystone well drill. Some of them were wet at the bottom.





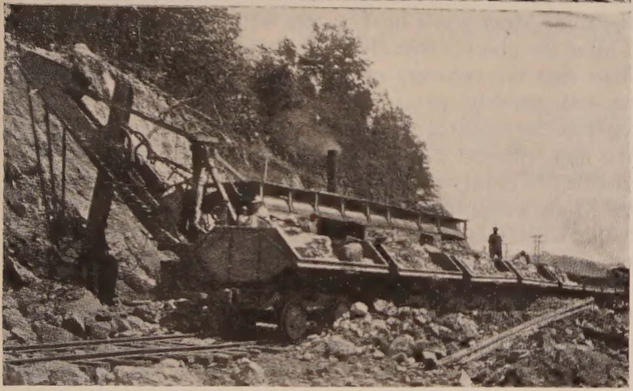


Fig. 1—The shot. Twenty-nine holes containing 21,500 lbs. of powder are exploding along 450 ft. of quarry face

Fig. 2—After the shot showing the amount of rock broken down by the blast. More than 60,000 tons were obtained

Fig. 3—The 3½-yard bucket of this Bucyrus shovel lifts the blasted rock into specially built 12-yard all-steel side dump cars

60% Gelatin and 13,000 lbs. a special high ammonia content powder. All the powder was in 5-in. x 16-in. cartridges.

Column loading was used, and the shot was fired with Cordeau and cap and fuse. The blast resulted in a splendid breaking up of the rock; the toe was pulled clean and there were only 3 very large boulders, these being unbroken because of a seam of oolitic limestone near the top of the cliff.

Twenty-nine holes comprised the shot. They extended over a distance of 450 ft., were spaced from 15 to 20 ft. apart, and had an average depth of 80 ft. The explosives charge in most cases was about 700 lbs.; two holes had as high as 1200 lbs.

The report of the blast is reproduced in part, below, to show how the loading details of the blast were recorded.

The F. L. Smidth Co., New York has recently shipped one of its traveling agitators to the Peerless Portland Cement Co., Detroit, for its new Detroit plant. Another agitator is being built for another plant in Michigan.

Universal Enlarging Facilities

The Universal Portland Cement Co. has asked for bids on a contract for the construction of a harbor at its Buffington, Indiana, plant, near Gary. The harbor will extend several hundred feet into the lake from the present shore line. Facilities will be provided for receipt and storage of raw materials, such as limestone, blast furnace slag and coal on the dock, also for the shipment of cement.

In addition to the above the cement company will soon ask bids on a traveling bridge for use on the dock, also for a system of conveyors which will take the raw material from the dock to the raw material buildings of the various mills. The plans include an entirely new modern cement plant adjacent to the dock with facilities to load directly into boats for delivery to ports on the Great Lakes.

The Buffington plant is the largest portland cement plant in the world, producing approximately 9,000,000 bbls. of cement annually. The company also has other plants at Pittsburgh and Duluth.

Atlas Company to Change Capital Stock

The directors of The Atlas Portland Cement Co. have submitted to the stockholders for approval changes in the company's capital stock as a result of which each share of the present common stock of $100 par value will be converted into three shares of common stock of no par value, and in addition the total authorized common stock of the company will be increased by 100,000 shares of no par value. Stockholders will meet on May 6 to act upon the changes proposed.

At the same time the directors propose that the authorized preferred stock of the company be reduced from $3,000,000 to $2,500,000 by canceling $500,000 of unissued or treasury preferred stock and changing the preferred stock of the company from $100 par value into shares of $33⅓ par value, and exchanging three shares of this preferred stock for each share of preferred now outstanding. It was stated by Mr. John R. Morron, President of the company, that this would not in any way alter the preferential right of the preferred stock to cumulative dividends at the present rate or the total par value of the holdings of any preferred stockholder.

After the proposed changes have been put into effect, the corporation's total capitalization will consist of 75,000 shares of preferred stock of $33⅓ each par value and 1,000,000 shares of common stock, without par value.

National Lime Association to Meet in May

The Seventh Annual Convention of the National Lime Association and the Twenty-third Annual Meeting of Lime Manufacturers will take place on May 26-29 at Briarcliff Lodge, Briarcliff Manor, Westchester Co., New York.

The meeting will follow the lines of the Annual Meeting last year at White Sulphur Springs, West Virginia, with the mornings and some of the evenings devoted to reports of work accomplished during the past year, results of fellowships as well as talks by well-known speakers on the subject of manufacturing problems. It is proposed to hold another Round Table Research Conference on one evening. Those present at the first of these conferences held last year will recall that it was extremely well attended and of great interest to everyone connected with the industry.

It is planned to have ample time set aside for sports, such as golf, tennis, swimming, horseback riding, quoits, and a baseball game, and the meeting will be concluded with a banquet and entertainment such as have always added interest to the National Lime Association meetings.

J. W. Louder

J. W. Louder, formerly manager for the Nazareth Cement Co., Nazareth, Pa., died March 7.

Mr. Louder was a graduate of Lafayette College 1895, where he pursued a special chemical course. Upon completion of his college work, he became chemist for the Atlas Portland Cement Co. at its Northampton plant and in 1896 was made assistant superintendent, which position he occupied until 1906. During that year he went to Rowelsburg, W. Va., as superintendent of the Buckhorn Cement Co., which plant is now operated by the Alpha Cement Co.

In 1908 Mr. Louder was made superintendent of the Nazareth Cement Co. which position he occupied until 1924, when he was made assistant to the president.

Mr. Louder had a thorough knowledge of cement manufacture, both from a theoretical and practical standpoint and his ability was generally recognized not only in the Nazareth region but throughout the industry in the United States. His death is a loss not only to the Nazareth company but will be felt in general throughout the industry.

Port Charges to Be Studied

Whether to reduce further port charges on European cement brought to Portland, Ore., in competition with Oregon-made portland cement or to declare that a growing home industry with a large payroll shall be permitted to prosper, is a question soon to be decided by the commission of public docks.

Arrayed against importers of cement who are seeking a second reduction of port charges are the three Oregon companies engaged in production of portland cement, with plants at Oswego, Gold Hill in southern Oregon, and at Lime, in eastern Oregon.

The fact that approximately 34,000 barrels of European cement is in storage in Portland, and that it is not moving in competition with Oregon made cement, although no duty is collectible on it, is said to be the reason prompting the importers to seek a reducton in this port's charges for wharfage, storage, loading, unloading and handling. The imported cement is said also to be untaxed locally.

Committee to Confer

Preliminary to a hearing on the question, which Oregon cement manufacturers hope will be publicly conducted, the operating committee of the dock commission—Ira L. Powers, A. H. Averill and F. C. Knapp, held a conference recently. This committee made a recommendation to the commission as to further reduction of port charges on imported cement and later a hearing on the issue may be called.

Aligned with the three Oregon cement producing companies is the Associated Industries of Oregon which will undertake to show that if European cement be given preferential treatment by port authorities the result will tend to break down one of this state's growing payroll industries.

Tests in Dispute

According to Dan C. Freeman, manager of the Associated Industries of Oregon, some lots of European cement received as ballast in Portland have failed to stand up to tests required and this fact has been distorted, he says, to show that Oregon cement was deficient in quality, whereas the home product has stood all tests and saved construction contractors from serious losses when using inferior imported cement.

President D. L. Carpenter, of the Beaver Portland Cement Co., is ready to go to the mat with proponents of the plan to make it easier for European cement to compete with the Oregon product. Aligned with him also are L. C. Howlands, vice president and manager of the Oregon Portland Cement Co., and George Macdonald, the active head of the new Sun Portland Cement Co., whose production plant is at Lime, in eastern Oregon.

California cement brought to Portland by water routes acts as a price regulator in this market, say traffic men and cement manufacturers, and that thereby Oregon and Washington cement consumers derive the benefit of competition without suffering all of the evils attendant with importation of tax free European cement.

Edge Moor—Allis-Chalmers Sales Agreement

Edge Moor Iron Co., manufacturers of Edge Moor water tube boilers, have arranged for the sale of Edge Moor waste heat systems in Europe and South America through the Allis-Chalmers Manufacturing Co.

With their long experience as manufacturers of crushing and cement mill machinery and with their well established offices in Paris, London and Santiago, Chile, the Allis-Chalmers Manufacturing Co. has made contacts with the cement mills of Europe and South America which afford friendly introduction for the Edge Moor waste heat system, and an exclusive representation has been granted it by the Edge Moor Iron Co. for these countries. Also, due to the fact that the engineers of the Allis-Chalmers Co. at Paris, London and Santiago have been trained in this country and abroad and are thoroughly familiar with cement plant engineering and operation, the Allis-Chalmers Manufacturing Co. is well qualified to render excellent service to purchasers of the Edge Moor waste heat system both during negotiations and after the plant is installed and operating.

Now that the recovery of waste heat from rotary cement kilns has entirely passed the experimental stage and is recognized as an integral part of cement making equipment in the new, efficient plants and as an improvement necessary to enable old plants to meet competition, the addition of the Edge Moor waste heat system to its own machinery places the Allis-Chalmers Manufacturing Co. in better position than ever to render a complete service to the cement industry of Europe and South America.

All engineering and designs for installation of waste heat recovery systems will be prepared for the Allis-Chalmers Manufacturing Co. by the Edge Moor Iron Co. designers and builders of Edge Moor water tube boilers and the Edge Moor waste heat system. These designs will be in accordance with the general plans and conditions under which the Edge Moor Iron Co. has already made more than 30 successful installations of waste heat recovery systems in the United States, Japan, the Philippine Islands, Australia and South America. Already under the terms of this new arrangement between the Edge Moor Iron Co. and the Allis-Chalmers Manufacturing Co. two Edge Moor waste heat systems have been sold, one for installation at Marseilles, France, and one for installation near Barcelona, Spain.

Bath Company's Plant Taken Over by Lehigh

The Bath Portland Cement Co. has entered into a lease with the Lehigh Portland Cement Co. whereby its plant located near Bath, Pa. will be operated by the lessee company beginning March 1, 1925. The plant has a capacity of approximately 3400 bbls. per day or slightly over 1,000,000 bbls. per year.

In addition, the property which the Bath company recently acquired at Sandt's Eddy, Pa. on the Delaware River about 6 miles above Easton, upon which a cement plant is now being constructed, has been deeded to the Lehigh company. This plant, when completed by the Lehigh company, will have an output of approximately 1,000,000 bbls. per year.

Men and Mills

Notes from the Field

The recent foreclosure action on the first mortgage bonds of the old Alsen cement plant of the Hudson Valley Portland Cement Corporation, at Catskill, N. Y., was independent of the receivership proceedings in which Martin Conboy of New York was appointed receiver. An order directing the sale of the plant has been signed by Judge Hand in United States Federal Court in New York and Earl B. Barnes of New York appointed Special Master to conduct the proceedings. February 26 was set as the date of sale.

The plant was sold by Earl B. Barnes, Special Master, on February 26, 1925 to Herbert M. Johnson, 49 Wall St., New York City. The bid was $500,000, and has been assigned to the Lehigh Portland Cement Co.

It has been announced at the Seattle offices of the Superior Portland Cement Co., that with 200 men employed at the plant not a single hour's time was lost on account of accident during January.

January is considered the most hazardous month of the year on account of weather conditions and the fact that during that month most of the machinery and equipment is overhauled and repaired. The company also is giving instruction in first aid, although it is the aim to avoid all accidents.

The Olympic Portland Cement Co.'s plant, Bellingham, Wash., is running at half capacity according to a statement made recently by A. F. Krabbe, general manager, but it is expected the plant will double its capacity and working force when it opens some time in April. The plant is now turning out about 1000 bbls. of cement daily.

Fire of undetermined origin destroyed the offices and store rooms of the San Antonio Portland Cement Co., at Cementville, recently.

The Virginia Portland Cement Co.'s plant in South Norfolk, Va., is rapidly nearing completion and will be in operation early in the summer.

Lee A. Poston of Catskill, N. Y., assistant to treasurer McConnell of the Acme Cement Corp., has resigned his position and gone with the J. G. White Construction Co. of New York.

William Baker of Saugerties, president of the Acme Cement Corp., arrived recently on the Atlantic Transport Line steamer Minnetonka, from a trip to Europe.

The Pennsylvania Crusher Co., Philadelphia, Pa., has recently appointed the Stratton-Cahoon Co., 809 McIntyre Bldg., Salt Lake City, Utah, district agents for the sale of its extensive line of coal preparation machinery and heavy duty primary, secondary and fine crushers for limestone, gypsum, cement rock and ores.

Contract for the bin walls for the stock house, slurry and correction tanks and the smoke stack for the new Bath plant at Sandt's Eddy, Pa., recently taken over by the Lehigh Portland Cement Co. has been sublet to the Spencer Construction Co., Baltimore, Md. by the Public Service Production Co., of Newark, N. J., which is building the complete plant including installation of machinery.

Good progress is being made with the plant of the Ohio Portland Cement Co., at Painesville, Ohio, which is controlled by the Diamond Alkali Co., Pittsburgh, Pa. The Diamond Alkali Co. already has a large alkali plant at Painesville and uses large quantities of limestone brought by boat from Calcite, Mich. The same stone is to be used in the manufacture of cement by standard methods.

The Spencer Construction Co., contractors and engineers, Baltimore, Md. reports that good progress is being made with the building operations covering all of the reinforced concrete construction for two complete new cement plants in Ohio, one for the Wabash Portland Cement Co., at Osborne, and another for the Diamond Alkali Co., at Painesville. This work includes stock houses, pack and bag houses, slurry tanks, chimneys and all miscellaneous foundation work as well as retaining walls.

The Spencer company is also in the midst of construction for a new stock house for the Lehigh Portland Cement Co., at Birmingham, Ala., and is just completing all the reinforced concrete work for the new cement plant at Coreen, Ga., built for the Clinchfield Portland Cement Corp.

Thomas J. Eck, yardmaster of the Northampton and Bath railroad at the Atlas Cement Co. yards, Northampton, met instant death recently under the wheels of a train in the yards. Mr. Eck was 60 years of age.

Although cement production is keeping up, shipments out of the mills of the Lehigh district are smaller than those of the corresponding period of last year. This is accounted for by the general unsatisfactory weather conditions. With the arrival of good weather an unprecedented demand for cement is anticipated.

Eldon Baughman, chief clerk of the Public Service Production Co. which is erecting a new cement plant planned for the Bath Portland Cement Co. at Sandt's Eddy, committed suicide in a temporary building of the cement company.

Daniel W. MacFetridge, for nearly twenty years the purchasing agent of the Lehigh Portland Cement Co., Allentown, Pa., died recently at his home there. He was 66 years of age.

Two of the six kilns at the Reliance mill of the Giant Portland Cement Co., Egypt, have resumed operations and the other four will be started soon. Latest machinery has been installed in the clinker mill of the Giant company, motive power for which has been changed to electricity.

Fred B. Franks, former general manager of the Bath Portland Cement Co., Bath, Pa., and his wife, have gone to Cuba for a brief visit.

The Ideal Cement Co., successor to the Cement Securities Co., Denver, declares its initial dividend of $1.75 a share on preferred and 75c on common. Both dividends are payable March 31 to stockholders of record March 14.

Cement demand in Chattanooga has been unusually brisk and local mills are having to expand their plants. The Dixie Portland Cement Co., has recently completed rebuilding its raw grinding department.

The Signal Mountain Portland Cement Co., is also running at capacity. In July, the additional unit now under construction will increase the mill capacity from 3000 bbls. per day to 4500 bbls.

Paul C. VanZandt, chief engineer of the Ideal Cement Co., Denver, has about completed the plans for the new plant to be erected near Fort Collins, Colo. It will require nearly a year to construct and place it in operation.

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Quoted from Dr. Frank Killig's article "The Oland Cement Company's Plant at Degerhamn, Sweden" in October issue of CONCRETE.

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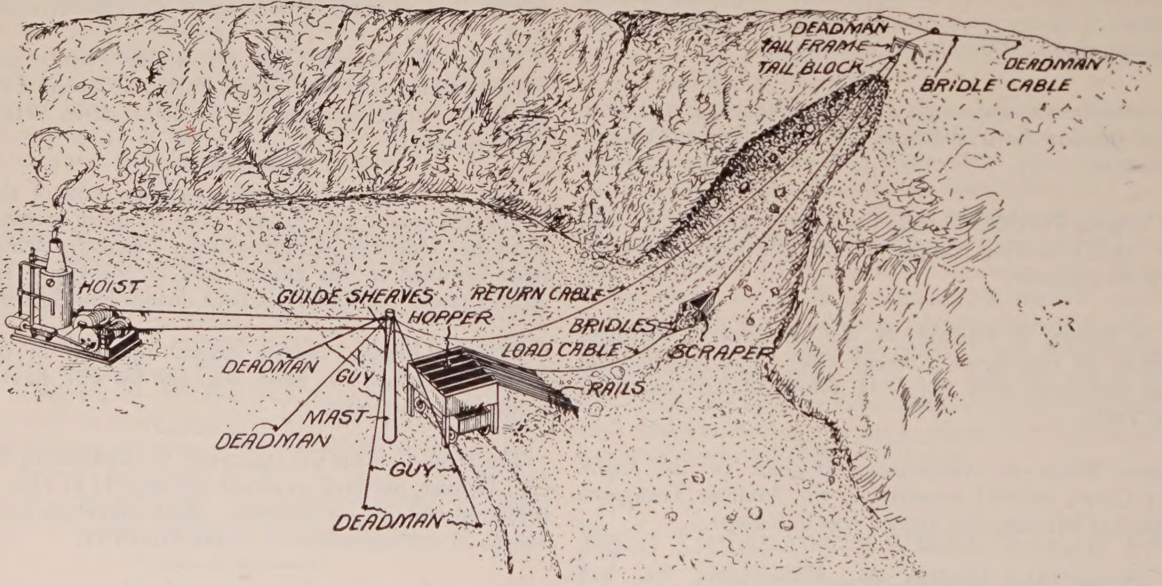

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